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INDIVIDUALIZING RADIOTHERAPY DOSE****Publication Classification**(71) Applicants: **Siemens Healthcare GmbH**, Erlangen
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ABSTRACT

For decision support in a medical therapy, machine learning provides a machine-learned generator for generating a prediction of outcome for therapy personalized to a patient. The outcome prediction may be used to determine dose. To assist in decision support, a regression analysis of the cohort used for machine training relates the outcome from the machine-learned generator to the dose and an actual control time (e.g., time-to-event). The dose that minimizes side effects while minimizing risk of failure to a time for any given patient is determined from the outcome for that patient and a calibration from the regression analysis.

